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(54) **Blade with platform cooling**

(57) A cooled turbine blade for a gas turbine engine has a platform cooling supply channel 34 that supplies cooling air to a plurality of cooling holes 36 in the surface

28 of the blade platform 24 adjacent the trailing edge 22 of the blade. The passage 34 extends between the sides 30, 32 of the blade platform 24 and communicates with feather seal slots 42, 44 provided on the blade platform.

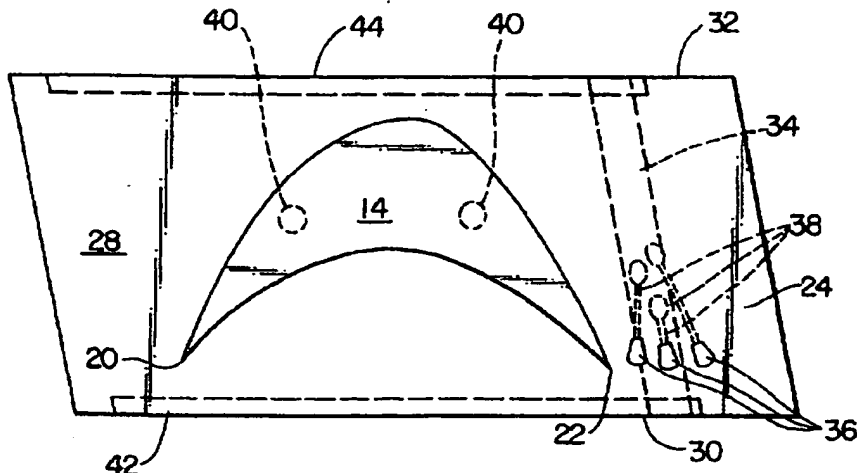


FIG. 2

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EUROPEAN SEARCH REPORT

Application Number
EP 99 30 9876

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	US 4 017 213 A (PRZIREMBEL HANS RAINER) 12 April 1977 (1977-04-12) * the whole document * * figures 1-8 *	1-5	F01D5/18 F01D11/00
A	US 4 353 679 A (HAUSER AMBROSE A) 12 October 1982 (1982-10-12) * the whole document * * figures 1-4 *	1-3,5	
A	FR 2 316 440 A (GEN ELECTRIC) 28 January 1977 (1977-01-28) * the whole document * * figures 4-7 *	1,5	
A	DE 198 07 563 A (MITSUBISHI HEAVY IND LTD) 24 September 1998 (1998-09-24) * the whole document * * figures 1-3 *	1,3,5	
A	US 5 531 457 A (TIBBOTT IAN ET AL) 2 July 1996 (1996-07-02) * the whole document * * figures 2-4 *	4	TECHNICAL FIELDS SEARCHED (Int.Cl.7) F01D
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 31 October 2001	Examiner Koch, R
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons A : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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31-10-2001

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4017213	A	12-04-1977	BR 7606847 A	30-08-1977
			CA 1058083 A1	10-07-1979
			DE 2643049 A1	21-04-1977
			FR 2328106 A1	13-05-1977
			GB 1516757 A	05-07-1978
			IT 1068785 B	21-03-1985
			NO 763456 A	15-04-1977
			SE 7610963 A	15-04-1977
US 4353679	A	12-10-1982	BE 853953 A1	16-08-1977
			CA 1072016 A1	19-02-1980
			DE 2718661 A1	02-02-1978
			FR 2359976 A1	24-02-1978
			GB 1572410 A	30-07-1980
			IT 1084622 B	25-05-1985
			JP 1366291 C	26-02-1987
			JP 53016108 A	14-02-1978
			JP 61019804 B	19-05-1986
FR 2316440	A	28-01-1977	DE 2628807 A1	27-01-1977
			FR 2316440 A1	28-01-1977
			IT 1079131 B	08-05-1985
			JP 52008214 A	21-01-1977
DE 19807563	A	24-09-1998	JP 10238302 A	08-09-1998
			CA 2230291 A1	25-08-1998
			DE 19807563 A1	24-09-1998
			US 6071075 A	06-06-2000
US 5531457	A	02-07-1996	CA 2207033 A1	13-06-1996
			WO 9618025 A1	13-06-1996
			CZ 9701722 A3	17-09-1997
			DE 69516423 D1	25-05-2000
			DE 69516423 T2	12-10-2000
			EP 0796388 A1	24-09-1997
			JP 10510022 T	29-09-1998
			PL 320635 A1	13-10-1997

EPO FORM P0439

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82